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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/777,766

02/13/2004

Toshio Mizue

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SMITH, GAMBRELL & RUSSELL
1850 M STREET, N.W., SUITE 800
WASHINGTON, DC 20036

EXAMINER

EL SHAMMAA, MARY A

ART UNIT

PAPER NUMBER

2883

SHORTENED STATUTORY PERIOD OF RESPONSE	MAIL DATE	DELIVERY MODE
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3 MONTHS

01/18/2007

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

If NO period for reply is specified above, the maximum statutory period will apply and will expire 6 MONTHS from the mailing date of this communication.

Office Action Summary

Application No.

10/777,766

Applicant(s)

MIZUE ET AL.

Examiner

Mary A. El-Shammaa

Art Unit

2883

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 13 February 2004 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. ____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 6/04, 11/06.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Claim Rejections - 35 USC § 112

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1 and 3-5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. The phrase "optionally positioned" is unclear because it appears from the previous claim limitations that it necessarily must be at least indirectly positioned to the frame. For the purpose of examination, the Examiner interprets it as being at least indirectly positioned to the frame.

Claim Objections

Claim 6 is objected to because of the following informalities: line 4, "in an entire" does not make sense and should be removed. Appropriate correction is required.

Claim 14 is objected to because of the following informalities: line 6, "flexibly" should be *-flexible-*. Appropriate correction is required.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1-4, 6, 8-15, and 17 are rejected under 35 U.S.C. 102(e) as being anticipated by Huang (US 6,830,383 B2).

Regarding claim 1, Huang discloses in Fig. 3an optical transceiver module having an optical semiconductor device coupled to an optical fiber via an optical connector attached to an end of said optical fiber, said optical transceiver comprising at least one optical subassembly (6) containing said optical semiconductor device therein; an optical receptacle (4) for optically coupling said optical fiber to said optical semiconductor device by mating said optical connector with said optical subassembly within said optical receptacle; a substrate (5) electrically connected to said optical subassembly; a frame (2) for installing said optical subassembly (6), said optical receptacle (4), and said substrate (5) by cooperating with said frame, wherein said optical receptacle (4) is optionally positioned to said frame (col. 2, line 43 through col. 5, line 11).

Regarding claim 2, Huang discloses said optical subassembly (6) and said substrate (5) are rigidly positioned to said frame (2), and said optical receptacle (4) is rigidly positioned to said optical subassembly (col. 4, lines 41-63).

Regarding claim 3, Huang discloses in Fig. 3 the frame (2) having a major surface (20) where said optical receptacle (4), said subassembly (6), and said substrate (5) are installed thereon, and wherein said optical receptacle (4) is optionally positioned to said frame in a direction across said major surface (20) of said frame (2).

Regarding claim 4, Huang discloses in Fig. 3 said frame has a hole (511) with a thread in an inner surface thereof and said optical receptacle has another hole cooperating with said hole of said frame, said another hole not providing any thread in an inner surface thereof, said hole of said frame forming a screw hole by cooperating with said another hole of said optical receptacle, and wherein said optical receptacle is optionally positioned to said frame by a screw (8) tightened in said screw hole.

Regarding claim 6, Huang discloses in Fig. 3 said optical subassembly (6) having a box-like shape having a bottom, said bottom facing to a major surface of said frame (2) and being in contact with said major surface of said bottom.

Regarding claim 8, Huang discloses in Fig. 3 said optical subassembly (6) having a disk-like shape (61, 62) and said frame has a receiving structure with a cylindrical surface corresponding to said disk-like shape, and wherein said optical subassembly is rigidly positioned to said frame by fitting said disk-like shape thereof to said cylindrical surface of said frame.

Regarding claims 9-11, Huang discloses said optical subassembly (6) being both a transmitting (61) and receiving (62) subassembly (col. 3, lines 11-15).

Regarding claim 12, Huang discloses said frame is made of metal and said optical subassembly is made of resin (col. 3, lines 45-55).

Regarding claim 13, Huang discloses said resin is coated with conductive material (col. 4, lines 21-28).

Regarding claim 14, Huang discloses in Fig. 3 an optical transceiver module comprising a transmitting optical subassembly (61) having a primary portion with a box-shape and a plurality of lead terminals (605), a laser diode being installed in said primary portion of said

receiving optical subassembly; a receiving optical subassembly (62) having a primary portion with co-axial shape and a flexible circuit board (5), a photodiode being installed in said primary portion of said receiving optical subassembly; and a substrate (5) including a plurality of electronic circuit elements thereon, wherein said transmitting optical subassembly is electrically connected to said circuit elements via said lead terminals and said receiving optical subassembly is electrically connected to said circuit elements via said flexible circuit board (col. 2, line 43 through col. 5, line 11).

Regarding claim 15, Huang discloses said substrate has first and second portions, said first portion extending from said second portion and locating side by side position with said transmitting optical subassembly, said first portion being electrically connected to said receiving optical subassembly via said circuit board and said second portion being electrically connected to said transmitting optical subassembly via said lead terminals (col. 2, line 43 through col. 5, line 11).

Regarding claim 17, Huang discloses and electric connector fixed to said substrate (col. 3, lines 15-18).

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 6,830,383 B2).

Regarding claim 5, Huang discloses the claimed invention except for the optical receptacle being positioned to the frame by adhesive filled there between. It would have been obvious to one having ordinary skill in the art at the time the invention was made to have the optical receptacle being positioned to the frame by adhesive filled there between, since it has been held to be within the general skill of a worker in the art to select a known material on the basis of its suitability for the intended use. In re Leshin, 125 USPQ 416. The motivation to use adhesive is adhesive is cost effective, efficient, and readily available.

Claims 7 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Huang (US 6,830,383 B2) in view of Kumar et al. (US 6,867,368 B2).

Regarding claims 7 and 16, Huang does not disclose said optical subassembly including a thermoelectric element therein for controlling temperatures of said optical semiconductor device. Kumar discloses said optical subassembly including a thermoelectric element therein for controlling temperatures of said optical semiconductor device (col. 11, lines 1-8). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have said optical subassembly including a thermoelectric element therein for controlling temperatures of said optical semiconductor device. The motivation to use Kumar's thermoelectric element is so as to provide a short thermal path.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Mary A. El-Shammaa whose telephone number is 571.272.2469. The examiner can normally be reached on M-F (8:30am-5:00pm).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Frank G. Font can be reached on 571.272.2415. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

MAE
January 4, 2007


Frank G. Font
Supervisory Patent Examiner
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